First, I appreciate the Federal Communications Commission (FCC) extending the time for comments on the Engineering and Technology Notice of Inquiry Docket No. 03-104 regarding Carrier Current Systems, including Broadband over Power Line Systems (BPL) to August 20, 2003.

As a licensed amateur radio operator, FCC call sign KL0S, I am very concerned with the spectrum pollution (interference) associated with the new broadband over power line technology the FCC is considering for approval for use by the power line industry.

As a retired U.S. Army officer I have had extensive experience in radio communications operations under active electronic warfare conditions and many of the those experiences mirror the noise conditions that will potentially be generated by the BPL initiative.

The industry plans to use a form of power line carrier (PLC) technology using existing low and medium-voltage power lines to deliver broadband (internet) services to homes and businesses. It uses frequencies between 2 MHz and 80 MHz; and ARRL laboratory and in field tests have documented that BPL causes interference (spectrum pollution) to HF and low-VHF frequencies currently in use by the Government (Department of Defense and Homeland Security), law enforcement agencies, amateur radio and commercial businesses. Further, the current BPL technology itself may be susceptible to transmissions from other existing services.

To appreciate the level of interference, please visit the ARRL web page at [http://www.arrl.org/news/stories/2003/08/08/2/?nc=1] and listen to the BPL interference recorded from one of the FCC test sites. As I mentioned the noise portrayed eerily matches that encountered during electronic warfare conditions. Contrary to power industry claims, the ARRL tests convinced me the current BPL technology will generate major interference to existing services, including amateur radio, public service and and potentially other Homeland Security communications activities such as those conducted under the MARS AND SHARES programs. The ARRL President, Mr. Jim Haynie is prepared to provide the FCC with more details. He can be reached at 214-366-9400 or w5jbp@arrl.org

Regarding the FCC Notice of Inquiry ET Docket No. 03-104, I recommend tightening of the FCC Part 15 requirements and/or standards for power line carrier (PLC) devices to assure they will not cause interference (or be susceptible from) to existing services. In addition, I would appreciate documentation from the FCC that adequate testing has been performed to assure broadband over power line technology will not cause interference to existing services. Hopefully, this testing will be well documented and made public before the technology is approved for use by the power line industry.

I recently had occasion to work with my local power provider, Dominion Virginia Power on a power distribution system generated incdiental radiator that caused significant noise at my home. The power company worked expeditiously to find and resolve the problem, however I can only imagine the magnitude of the problems that potentially will be initiated by BPL type incidental radiation levels. With only that small problem (a faulty underground cable splice) my ability to communicate was severely degraded, much to the same degree as discovered by the ARRL in their fact finding mission mentioned above.

All communicators, both profesional and amateur sincerely hope the power line industry discovers a technical solution to the BPL interference issue so we can all enjoy the benefits of having broadband internet to our home via power lines.

Thank you for your consideration of my input to this most important issue.

Constantine T. Papas
Colonel, U.S. Army Retired
Amateur Radio Operator KL0S
Army MARS/SHARES Operator AAT3BE